



- Updates on:
  - Annual Wolf Monitoring
  - Wolf Mortalities
  - Wolf sighting project



- Spring 2015: 52 wolves/ 18,820 km<sup>2</sup>
- 10 marked packs 47 wolves (20 collars)
- I uncollared pack 4, Loner I

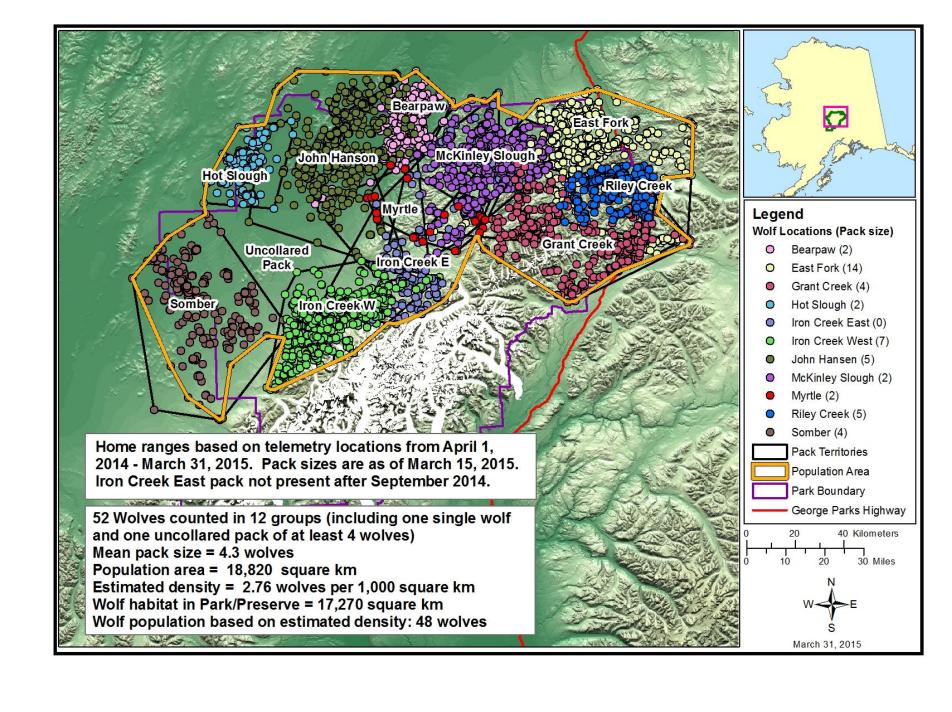


- Young East Fork male, dispersed over 200 miles
- See details: www.nps.gov/articles/wolf\_dispersal.htm





- Iron Creek East- pack dissolved after both collared wolves died
  - Female died starvation
  - Male dispersed, then drowned
- Myrtle Pack- new pair located and collared in prior range





- Density estimate: 2.8 wolves per 1000 km<sup>2</sup>
- Lowest density estimate since monitoring began (1986)
  - Increasing use of GPS collars, series of mild winters
- However, number of wolves has also declined
- Density 2001-2003: 5.6 6.4 wolves per 1000 km<sup>2</sup>



Causes of decline unknown, but several potential factors

Low snowfall, mild winters Reduced caribou vulnerability

Mech, L. D., L. G. Adams, T. J. Meier, J. W. Burch, and B. W. Dale. 1998. The Wolves of Denali. University of Minnesota Press, Minneapolis, MN, USA.



#### Causes of decline unknown, but several potential factors

#### Poor pup recruitment- compare:

6 out of 10 packs, 14 pups

91% denning (72 of 79) 88% recruitment (63 of 72)

(in subset of eastern region packs, 1997-2012)

Borg, B. L., S. M. Brainerd, T. J. Meier, and L. R. Prugh. 2015. Impacts of breeder loss on social structure, reproduction and population growth in a social canid. Journal of Animal Ecology 84:177—187.



#### Causes of decline unknown, but several potential factors

- Mortality of wolves from human and natural causes
  - Source of on going monitoring and investigation



- Wolf Mortalities April 2014-March 2015
- 9 collared wolves died
  - 2 killed by wolves
  - 5 other natural causes
    - I drowned, I old age, I starve
    - 2 unknown natural causes
  - I legally shot (John Hansen female)



# Wolf Mortalities April 2014-March 2015

- I snared
  - Young East Fork male
    - Captured, collared (VHF) March 2014 as 10 month pup
    - 2 locations in January & February
    - Jan: outside park
    - Feb: at moose kill near Sanctuary River, recovered at site March 12



#### Wolf Mortalities Since March 2015

- I starved: Loner (poodle male)
- I wolf killed: Somber male
- 2 shot: East Fork male (collared), female (uncollared)

#### For more information:

http://www.nps.gov/dena/naturescience/wolves.htm

